REMARKS

Claims 1-6, 9-12, 15-18, 28-31 are pending in the application.

Claims 1-6 and 9-12 were rejected.

Claims 15-18 and 28-31 were allowed

I.   35 USC §103 Claim Rejections

In the Office Action, independent claims 1 and 9 were rejected under 35 USC §103(a) as being unpatentable over Goto (U.S. Patent No. 4,939,772) in view of Key *et al* (U.S. Patent No. 5,991,272) and further in view of Duault *et al.* (U.S. Patent No. 5,912,894). Applicants respectfully traverse those rejections and submit that, in view of amendments made herein, independent claims 1 and 9 are patentable over the cited art.

The invention here provides a dynamic call admission methodology that operates at an ATM network edge, and is particularly useful for applications invoking ATM Adaptation Layer Type 2 (AAL2). The dynamic call admission methodology of the invention uniquely makes an admission decision as a function of call type – in particular, that methodology takes into consideration different bandwidth needs for different call types. A key feature of the invention is a recognition that different call types transmitted over a voice circuit have substantially different bandwidth requirements and vary widely in the applicability of statistical multiplexing for a given call type. In the exemplary embodiment described for the invention, call admission is dynamically adapted depending on whether a call using a voice circuit is actually a voice signal, a facsimile signal, or a data signal modulated onto a voice carrier by a modem. A particular feature of the invention is the determination of bandwidth available for admission of voice calls as a function of the number of non-voice calls admitted.

The primary reference, Goto, is not analogous art to that of the invention in any meaningful sense. The Goto teaching is addressed to a simple audio signal detection device

8

operated at an end user terminal to recognize a difference in an initial audio signal of an incoming call as between a voice call and a facsimile call. Based on that audio-signal recognition function, the device of Goto then causes the incoming call to be switched between a telephone set and a facsimile machine at the user premise. Moreover, unlike the novel call admission methodology disclosed and claimed by the inventors, the Goto reference does not address call admission at all, as that term is understood in the art. Thus, Applicants submit, Goto fails both as a teaching of asserted elements of their claimed invention, and additionally as not being analogous art to that of the invention.

Even if Goto were accepted as teaching all that is asserted by the Office Action, it is clear, as acknowledged by the Office Action, that it does not teach or suggest the limitations of Applicants' claims respecting (1) "determining an amount of bandwidth available for voice as a function of a number of non-voice admitted calls" and (2) "updating a count of a number of voice calls currently admitted, when the admitted incoming call is a voice call." To address this deficiency, the Office Action relies on Key as teaching these limitation along with the assertion that it would have been obvious to one skilled in the art to combine that asserted teaching of Key with Goto to replicate the claimed invention. Applicants respectfully suggest that such an interpretation of Key is not supportable.

While Key is generally directed to call admission in a network, Applicant does not believe that a fair reading of Key's disclosure supports a construction from which the limitation in question could be derived. Indeed, the specific portion of Key cited by the Office Action in respect to an asserted teaching of the first listed limitation ("determining an amount of bandwidth …") – *i.e.*, Figure 7 and the explanation of that figure in the specification -- is simply a series of curves defining an admissions boundary for voice calls, at one extreme and

video data at the other extreme for different conditions of network loading and QoS requirements. Applicants respectfully submit that nothing in the cited figure or the textual explanation thereof could reasonably be construed to show or suggest the feature of Applicants' claimed invention whereby the amount of bandwidth made available for voice calls is determined as a function of a number of non-voice admitted calls.

The specific portion of Key cited in respect to an asserted teaching of the second cited limitation above ("updating a count of a number of voice calls ..."), is the following text:

> "Similarly if the number of 64 kbps CBR calls is in the range 1890-2156 θ_1 would be used. Otherwise, θ_2 would be used."

Although Applicants disagree that the cited statement from Key could reasonably be construed to teach the limitation in question, it is also clear, as addressed more generally below, that selection of such an isolated, non-contextual snippet from a cited reference as teaching a specific claim limitation is not permitted for a §103 rejection under established judicial construction.

Applicants' claimed invention further includes a unique feature whereby a threshold parameter for "block dropping" in the presence of congestion is varied as a function of the available voice bandwidth. While the Office Action here concedes that this limitation is not taught or suggested by Goto or Key, a new reference, Duault, is cited as teaching this feature, along with the assertion that it would have been obvious to one skilled in the art to combine that asserted teaching of Duault with the teaching of Goto and Key to replicate the claimed invention. Applicants respectfully suggest that such an interpretation of Dualt is not supportable.

As a starting point, it is noted that the portion of Duault relied on by the Office Action as teaching the asserted limitation is nothing but the preamble to Duault's disclosure, and reads in its entirety"

> "The invention deals with a method and system for dynamically adjusting the communications bandwidth assigned to an audio channel connection in a high speed digital network."

> Plainly, nothing in the cited text from Duault can reasonably be construed to teach Applicants' claim limitation of "dynamically varying a block-dropping threshold parameter as a function of the available voice bandwidth." Moreover, while Duault is generally addressed to bandwidth management for links carrying multiple traffic types, the idea of block dropping is simply not considered in Duault's disclosure. Certainly nothing in that disclosure could reasonably be construed to teach or suggest the idea of varying a block dropping threshold parameter as a function of available voice bandwidth.

It bears particular emphasis that the variation in the threshold parameter values according to the invention is a function of *only* the bandwidth available for voice calls -- *i.e.*, total bandwidth available on the virtual circuit minus the bandwidth allocated to non-voice calls admitted to the virtual circuit. This is an important distinction. As Applicants explained in the written description of their invention, the value of the queue-fill parameter of the block-dropping algorithms of the art pertain only to the number of voice-call packets waiting in the buffer for transmission. However, as Applicants also noted in their written description, voice-call packets are queued together with non-voice-call packets in the buffer. Thus the amount of buffer capacity available for voice-call packets varies depending on the number of non-voice-call packets in the buffer, which is expected to be proportional to the virtual circuit bandwidth assigned to non-voice calls. By adapting the block-dropping threshold values for the buffer as

a function of the bandwidth available for voice calls, the invention achieves an improved utilization of buffer capacity, and less likelihood of buffer overflow, than that of the prior art.

In the final analysis, the Applicants submit that the approach of the Office Action here amounts to a finding a collection of isolated elements in disparate prior art references (including primary reference not even being analogous art) that collectively (and assertedly) comprise all of the elements of the claimed invention. Such an approach clearly constitutes the use of the "hindsight" provided by the Applicant's disclosure as a basis for interpreting the teaching of the prior art. That approach is clearly prohibited in U.S. patent law. See, *e.g.*, *In re Rouffet* (149 F.3d 1350, 1357 (1998): "use [by the Examiner of] the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention …would be an illogical and inappropriate process by which to determine patentability".

Moreover, while Applicants believe that the cited references fail even to provide a teaching that could lead one skilled in the art to the invention here, the rejection is also devoid of another critical factor. It is well established that a §103 obviousness rejection must include a showing of a motivation in the applied references to use the teaching of the cited combination of references in a manner to replicate the claimed invention. The Federal Circuit's discussion of the "obviousness" standard in *In re Rouffet* (*id*), is instructive in this regard.

The court stated:

> Virtually all inventions are combinations of old elements [*citations omitted*].
> Therefore an examiner may often find every element of a claimed invention in
> the prior art. If identification of each claimed element in the prior art were
> sufficient to negate patentability, very few patents would ever issue.
> Furthermore, rejecting patents solely by finding prior art corollaries for the
> claimed elements would permit an examiner to use the claimed invention itself

12

as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be an illogical and inappropriate process by which to determine patentability.

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

Simply put, there is no teaching in Goto, Key or Duault that could be read to suggest a modification of Goto (which does not even teach call admission) to provide a dynamic call admission methodology for voice band circuits, where call admission is made as a function of call type and where bandwidth available for voice is determined as a function of the number of non-voice admitted calls, nor the updating of the number a count admitted voice calls with admission of a new voice call. Accordingly, Applicants respectfully submit one skilled in the art would have found no motivation for combining those references in the manner suggested by the Office Action, and thus that the §103 rejection must fail.

Applicants accordingly submit that rejected independent claims 1 and 9 are patentably distinct from the art of record herein. Withdrawal of the §103 rejection of those claims is respectfully requested.

II.   35 U.S.C. §103 Depenndent Claim Rejections

Dependent claims 2-6 and 10-12 were rejected under 35 U.S.C. §103 as being unpatentable over the combination of Goto, Key and Duault applied against independent claims 1 and 9 along with additional cited secondary references. All of these rejected claims

depend, either directly or indirectly, from one of independent claims 1 or 9, which have been shown above to be patenable over the Goto/Key/Duault combination. Accordingly, those dependent claims must also be patentable. Withdrawal of the §103 rejection of dependent claims 2-6 and 10-12 is accordingly respectfully requested.

III.   Allowed Claims

The Applicants note their appreciation for the Examiner's indication of claims 15-18 and 28-31 being allowed.
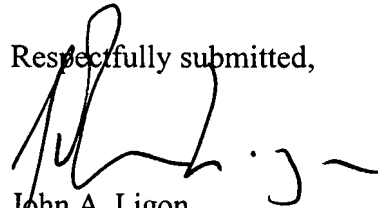
IV.   Conclusion

Having fully addressed the Examiner's rejection bases herein, it is believed that, in view of the preceding remarks, all of the claims in this application now stand in condition for allowance. Such allowance is respectfully requested.

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Please charge any fees due in respect to this amendment to Deposit Account No. 50-1944.

Respectfully submitted,

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Dated: July 5, 2007

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I hereby certify that this Response to Final Office Action is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on July 5, 2007.

By: _____
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